

# ABC-NET: LITERACY TOOL FOR PAULO FREIRE'S METHOD

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## ABSTRACT

Paulo Reglus Neves Freire was born in Recife in 1921, the capital of Brazil's northeast province. Through all his life, he developed the fundamentals of a teaching process with special characteristics. The fundamentals of his 'system' point to an educational process that focuses on the student environment. abcNet is a web-based application which seeks the goals of learning how to read and to write, following Paulo Freire's methodology.

## KEYWORDS

abcNet, Paulo Freire, literacy, e-learning, tool

## 1. INTRODUCTION

The new technologies not only create excellent opportunities for the human development and fulfillment, but also enhance the challenge of making them accessible to all, including the ones away from the current information society. abcNet presents a structure based on the Web and has as its main aim putting at one's disposal contents to be used in the teaching of how to read and write. It is based on a method proposed by Paulo Freire and works with mechanisms used in the new communication technologies, such as active mechanisms for the interaction with users like buttons, hyperlinks, visual effects, etc, mechanisms of text, image and movie watching; mechanisms of listening. In the book "*Educação como Prática de Liberdade*" (Education as Freedom Practice), Paulo Freire presents the accomplishment of his method in five steps: 1) studying of the vocabulary used by the students; 2) selection of generating words; 3) recreating real scenarios; 4) programming the course; 5) creating tests with words broken apart in their syllables. At the present moment, abcNet focuses essentially on the last step. The development of abcNet is scheduled in two phases. The first one, which is in course, focuses on the developing the process associated with the learning of how to read and write. In the second phase, abcNet will deal with the following topics: a) continue the processes started in the first phase; b) develop a statistical study of the teaching moments; c) contents and tools to help understanding the contexts associated with generating words; d) digital libraries. The word is the fundamental unit of the teaching process. The selection of words is the key to the success of the teaching and learning process. Each of the selected words is called a generating word; the set of generating words is called the universe of the generating words.

## **2. PEDAGOGICAL ISSUES**

At this phase, abcNet is only concerned with the learning of how to read and write. As it has been mentioned before, the word is the fundamental unit of the teaching process. Starting from the word, the teaching process follows a methodology based on syllables. It is through these syllables that the methodology will develop, by breaking up the word in syllables and also by grouping syllables into words.

### **2.1 Syllables**

Syllables represent the basic division of every word. They are the minimum element of the learning process of how to read and write. Syllables can be grouped into sets sharing common features. These groups of syllables will provide extra flexibility in the planning of the learning process. We defined 4 groups of syllables: a) family: those obtained by the substitution of the vowel of one syllable for the other four vowels of the alphabet; b) homophonous: two syllables are said to be homophonous when they have the same pronunciation in spite of a different spelling; c) homographs: two syllables are said to be homographs when they have different pronunciation in spite of the same spelling; d) adjacent: syllables we obtain by adding or removing an accent or a nasalization mark from a syllable. All of these syllables are the basic elements used by the students to learn how to read and write.

### **2.2 Teaching Units**

A teaching unit is the basic teaching structure in abcNet goals. A teaching unit consists of a set of forms with which the students interact and work to achieve certain goals in terms of how to read and write. Each teaching unit results from a configuration of a teaching template where the teacher may choose which words, syllables, sounds, images, etc, are required to achieve the goal. From each one of the teaching templates, configured by the teacher, abcNet will generate automatically all the necessary teaching units. We may say that a course planning requires the following stages: a) select which teaching templates to use; b) configure each teaching template to obtain the teaching units; c) ordering of the teaching units. We should notice that one teaching template may be configured as many times as necessary in order to generate as many teaching units as necessary. abcNet provides two types of teaching units: a) one to the learning of how to read (reading units); b); one to the learning of how to write ( writing units ).

### **2.3 Reading Units**

The reading units are those specifically developed to the learning of how to read. At this moment, abcNet provides three reading units.

#### **2.3.1 Reading Unit 1**

Goal: reading unit 1 aims at learning how to read written syllables.

Methodology: The student must be able to select amongst some syllable pronunciations, the one that corresponds to the correct reading of a syllable shown on the form. Each one of the pronunciations can be heard as many times as the student wishes.

Configuration: In the configuration process, the teacher may define: a) the syllable to be presented of which the pronunciation must be given; b) the group of pronunciations from which the student will select the correct one.

#### **2.3.2 Reading Unit 2**

Goal: Reading unit 2 aims at learning how to read written syllables.

Methodology: The student must be able to select amongst some written syllables on the form, the ones which correspond to the pronunciation heard. The student may hear the pronunciation as often as he wishes.

Configuration: In the configuration process, the teacher may define: a) the pronunciation to be heard; b) the written syllables to be presented

### 2.3.3 Reading Unit 3

Goal: Reading unit 3 aims at learning how to read written words.

Methodology: The student must be able to select amongst some given pronunciations, the ones that correspond to the reading of a given word presented on the form. The student may hear the given pronunciations as often as he wishes.

Configuration: In the configuration process, the teacher may define: a) the word to be presented on the form; b) the pronunciations to be heard

## 2.4 Writing Units

The writing units are those specifically developed to the learning of how to write. At this moment, abcNet provides two writing units.

### 2.4.1 Writing Unit 1

Goal: Writing unit 1 aims at learning how to build words starting from a single generating word.

Methodology: From a generating word and its corresponding image, abcNet presents: a) the generating word; b) an image associated to the generating word; c) the generating word divided into its syllables; d) the

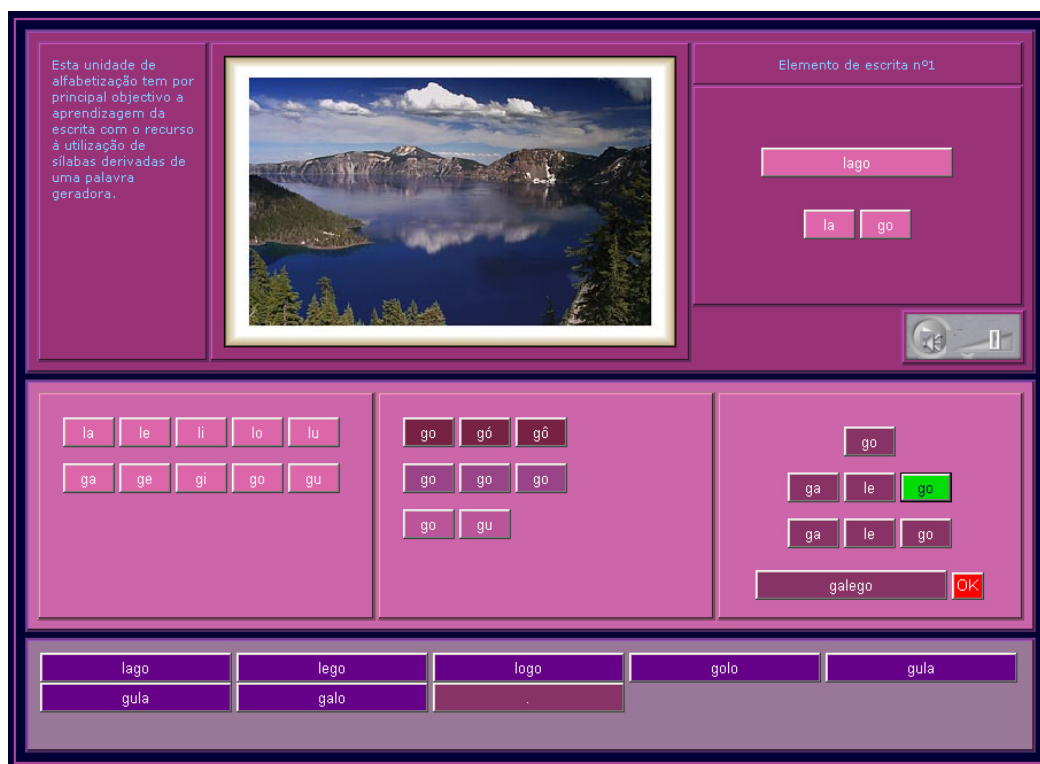


Figure 1. The Writing unit 1

family syllables of the generating word syllables; e) the other syllable groups ( homophonous, homograph s and adjacent ) for all presented syllables; f) a place where the student may build the proposed words which can be heard as often as necessary; g) a place to show all the already created words.

The student must build a series of words, one at a time. The student may hear the current word and each of its syllables. Then he must select from the available written syllables, the ones that match the pronunciation heard.

Configuration - In the configuration process, the teacher may select: a) a generating word; b) an image associated with the generating word; c) besides the group of the family syllables, other groups to present; d) words to be built and the order in which they appear.

Figure 1. shows an example of the writing unit 1. We can see: a) top left: a description of the teaching unit; b) top center: an image of a lake; c) top right: the generating word 'lago' (lake) and its syllables; d) center left: the family of all syllables from the generating word ( syllable 'go' selected ); e) center center: the adjacent, homograph and homophonous groups of syllables of the 'go' syllable; f) center right: the building of the word "ga-le-go"; the student has just selected the last correct syllable ( go ); g) down: all the words already built by the student and the one in the building process ( not yet shown ).

### 2.4.2 Writing Unit 2

Goal - Writing unit 2 aims at forming complete words starting from a group of syllables.

Methodology - The student is given a word divided into its syllables. One or more of these syllables may or may not be visible. The student must be able to build or complete the word by selecting the written syllables from the ones available.

Configuration - In the configuration process, the teacher may define: a) the word and the visible syllables; b) the range of syllables for the building process

## 3. TECHNOLOGICAL ISSUES

abcNet is an application based on the Web. In order to avoid problems associated with technological incompatibilities, some blocks of abcNet will only be built with standard technologies, such as: HTML, XML, SOAP, web services, Flash, etc. For the teaching purpose, abcNet will only require a web browser and some well known and free downloaded plug-ins.

## 4. CONCLUSION

abcNet has got many advantages if compared with traditional methods of teaching how to read and write. These advantages can be classified as follows: 1) planning – a) teachers have at their disposal templates that can be used in the planning of the teaching sessions; b) each template can be configured in order to achieve the aims defined by each teacher to a specific teaching session; 2) evaluating – a) in a near future, abcNet will provide mechanisms for statistical treatment; b) it works out learning profiles; 3) self-management: a) the online mechanisms provide the students with a greater degree of independence from the teacher; b) each student may have his own learning rhythm. abcNet may have the following disadvantages: 1) it requires a previous knowledge and training on how to use the application; 2) it requires an information platform prepared to fulfill the application needs. We may also present some restrictions of abcNet which come from the fact that it is at the beginning of its developing process, so it does not yet include the following features: a) context understanding; b) statistics; c) digital libraries; d) other languages than Portuguese. The flexibility of abcNet makes it suitable for students of any age. abcNet can be used to teach adults, teenagers or children by providing specific interfaces for each group. It is the teacher who chooses the resources to be used ( words, syllables, images, teaching units, interface, etc ) and the way these resources are going to be handled by the students.

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